

CLAIMS

1. A method for selectively recording a first data stream in a first format, not a second data stream in a second format, on a storage medium,

wherein each said data stream is an arrangement of a plurality of data units, each including compressed and encoded video data, and

wherein in the first format, a first time range is set to define a permissible variation in the video playback duration of the respective data units, and

wherein in the second format, a second time range is set to define a permissible variation in the video playback duration of the respective data units,

the method comprising the steps of:

receiving a content representing the video;

generating the compressed and encoded video data of the content;

making the data units out of the video data such that the playback duration of each said data unit falls within

both of the first and second time ranges; and

recording the first data stream, including the data units, on the storage medium.

5 2. The recording method of claim 1, wherein the first time range includes a time range for a first terminal data unit, which is located at the end of the first data stream, and a time range for the data units other than the first terminal data unit, and

10 wherein the second time range includes a time range for a second terminal data unit, which is located at the end of the second data stream, and a time range for the data units other than the second terminal data unit, and

 wherein the step of making the data units includes
15 making the terminal data units such that the playback duration of each said terminal data unit falls within the respective time ranges of both the first and second terminal data units.

20 3. The recording method of claim 2, wherein if the

playback duration of a data unit being made when the first data stream finishes being recorded is less than the minimum value of the playback duration of the terminal data unit that falls within both of the two time ranges,

5 the step of making the data units includes combining the data unit being made with its previous data unit, thereby making the terminal data unit, of which the playback duration is the minimum value of the two time ranges.

10 4. The recording method of claim 1, further comprising the step of generating management information about the amount of data and the number of pictures included in each said data unit,

 wherein the step of recording includes recording the
15 management information on the storage medium as a different data stream from the first data stream.

 5. The recording method of one of claims 2 to 4, wherein the time range for the first terminal data unit is 0 second
20 through 1 second, and the time range for the second terminal

data unit is 0.4 second through 1.2 seconds.

6. The recording method of claim 5, wherein the time range for the data units other than the first terminal data unit and the time range for the data units other than the second terminal data unit are both 0.4 second through 1.0 second.

7. The recording method of claim 1, wherein the first time range is 0 second through 1 second, and the second time range is 0.4 second through 1.2 seconds.

8. The recording method of claim 2, wherein if the playback duration of a data unit being made when the first data stream finishes being recorded is less than the minimum value of the playback duration that falls within both of the two time ranges, then the step of making the data units includes discarding the data unit being made.

9. The recording method of claim 2, wherein the step of

making the data units includes

receiving an instruction to stop recording the first data stream and

if the playback duration of a data unit being made when
5 the instruction is received is less than the minimum value of the playback duration that falls within both of the two time ranges, continuing recording until the playback duration reaches the minimum value.

10 10. An apparatus for selectively recording a first data stream in a first format, not a second data stream in a second format, on a storage medium,

wherein each said data stream is an arrangement of a plurality of data units, each including compressed and
15 encoded video data, and

wherein in the first format, a first time range is set to define a permissible variation in the video playback duration of the respective data units, and

wherein in the second format, a second time range is set
20 to define a permissible variation in the video playback

duration of the respective data units,

the apparatus comprising:

an input section for receiving a content representing
the video;

5 a compressing section for generating the compressed and
encoded video data of the content;

a stream assembling section for making the data units
out of the video data such that the playback duration of each
said data unit falls within both of the first and second time
10 ranges; and

a writing section for recording the first data stream,
including the data units, on the storage medium.

11. The apparatus of claim 10, wherein the first time
15 range includes a time range for a first terminal data unit,
which is located at the end of the first data stream, and a
time range for the data units other than the first terminal
data unit, and

wherein the second time range includes a time range for a
20 second terminal data unit, which is located at the end of the

second data stream, and a time range for the data units other than the second terminal data unit, and

wherein the stream assembling section makes the terminal data units such that the playback duration of each said
5 terminal data unit falls within the respective time ranges of both the first and second terminal data units.

12. The apparatus of claim 11, wherein if the playback duration of a data unit being made when the first data stream
10 finishes being recorded is less than the minimum value of the playback duration of the terminal data unit that falls within both of the two time ranges,

the stream assembling section combines the data unit being made with its previous data unit, thereby making the
15 terminal data unit, of which the playback duration is the minimum value of the two time ranges.

13. The apparatus of claim 10, further comprising a control section for generating management information about
20 the amount of data and the number of pictures included in each

said data unit,

wherein the writing section records the management information on the storage medium as a different data stream from the first data stream.

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14. The apparatus of one of claims 11 to 13, wherein the time range for the first terminal data unit is 0 second through 1 second, and the time range for the second terminal data unit is 0.4 second through 1.2 seconds.

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15. The apparatus of claim 14, wherein the time range for the data units other than the first terminal data unit and the time range for the data units other than the second terminal data unit are both 0.4 second through 1.0 second.

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16. The apparatus of claim 10, wherein the first time range is 0 second through 1 second, and the second time range is 0.4 second through 1.2 seconds.

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17. The apparatus of claim 11, wherein if the playback

duration of a data unit being made when the first data stream finishes being recorded is less than the minimum value of the playback duration that falls within both of the two time ranges, then the stream assembling section discards the data
5 unit being made.

18. The apparatus of claim 11, wherein the stream assembling section receives an instruction to stop recording the first data stream, and if the playback duration of a data
10 unit being made when the instruction is received is less than the minimum value of the playback duration that falls within both of the two time ranges, the stream assembling section continues recording until the playback duration reaches the minimum value.